

**Notice of Allowability**

Application No.

10/727,703

Applicant(s)

ALBRECHT ET AL.

Examiner

Art Unit

Dismerly E Mercedes

2651

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/727,703.
2. ☒ The allowed claim(s) is/are 38.
3. ☒ The drawings filed on 12/03/2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date ____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                    | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other ____.   |

## REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

Regarding Claim 1, the cited prior art of record, taken alone or in combination, and in particular Sato et al. (US 5,458,987), Parkin (US 5,583,727), Litvinov et al. (US 6,660,357 B1), fails to teach or suggest that each island comprising at least two stacked magnetic cells, each cell in an island being separated from the other cells in its island and having a magnetic moment oriented in one of two opposite directions substantially perpendicular to the substrate; the head being capable of switching the orientation of the moment of one cell in an island without switching the orientation of the moments of the other cells in that island.

Regarding Claim 30, the cited prior art of record, taken alone or in combination, and in particular Sato et al. (US 5,458,987), Parkin (US 5,583,727), Litvinov et al. (US 6,660,357 B1), fails to teach or suggest that each island comprising at least two stacked magnetic cells and a nonmagnetic spacer layer between said at least two cells, each cell in an island having a magnetic moment oriented in one of two opposite directions substantially perpendicular to the substrate, the cell closer to the substrate in each of the islands having a coercivity greater than the other cells in the islands; the head being capable of switching the orientation of the moment of one cell in an island without switching the orientation of the moments of the other cells in that island.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Yamane et al. (US, 5,844,755) discloses a giant magnetoresistive information recording medium, and associated recording and reproducing method and apparatus.

Art Unit: 2651

- Litvinov et al. (US 6,660,357 B1) discloses a perpendicular magnetic recording media with laminated soft magnetic underlayer.
- Marinero et al. (US 6,773,764 B2) discloses a method of forming a patterned magnetic recording medium.
- Girt (US 6,737,172 B1) discloses a multi-layered anti-ferromagnetically coupled magnetic media.
- Fullerton et al. (US 6,391,430 B1) discloses a patterned magnetic recording media with discrete magnetic regions separated by regions of antiferromagnetically coupled films.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E Mercedes whose telephone number is 703-306-4082. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 2651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dismery E Mercedes  
Examiner  
Art Unit 2651

DM

*nm 2/14/05*

  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600